

09/458,897
Page 9 of 16

REMARKS

This amendment is intended as a full and complete response to the non-final Office Action mailed December 18, 2003. In the Office Action, the Examiner notes that claims 1-21 are pending, of which claims 1-21 stand rejected. By this amendment, claims 1, 6, 8, 11, and 21 have been amended, and claims 2-5, 7, 9-10, and 12-20 continue unamended.

In view of both the amendments presented above and the following discussion, the Applicant submits that none of the claims now pending in the application are non-enabling, anticipated or obvious under the provisions of 35 U.S.C. §112, §102 or §103. Thus, the Applicant believes that all of these claims are now in allowable form.

It is to be understood that the Applicant, by amending the claims, does not acquiesce to the Examiner's characterizations of the art of record or to Applicant's subject matter recited in the pending claims. Further, Applicant is not acquiescing to the Examiner's statements as to the applicability of the art of record to the pending claims by filing the instant responsive amendments.

Objections

The Specification

The Examiner has objected to the specification because of the following informalities: "Page 14, lines 9-10 state 'in step 416, until the session ends, at step 418' which should state --in step 414, until the session ends, at step 416--." Applicant has amended the specification as suggested by the Examiner. Therefore, Applicant respectfully requests that the Examiner's objection be withdrawn.

The Claims

The Examiner has objected to claims 6, 8 and 21 because of various informalities.

"In Claim 6, line 3 [sic], 'said plurality of access controller' should be changed to --at least one access controller--. In response, the Applicant has amended claim 6 as per the Examiner's suggestion.

09/458,897
Page 10 of 16

In Claim 8, line 2, the Applicant has amended the claim to include the feature that the at least one storage device comprises "a plurality of storage devices." Thus, for the purposes of examination of claim 8, and any claims dependent on claim 8, the terminology 'at least one storage device' may be positively interpreted as 'said plurality of storage devices'.

Claim 21, line 1 states 'The apparatus of claim 120, wherein:' should state "The apparatus of claim 20, wherein" In response, the Applicant has amended the claim 21 as suggested by the Examiner.

The Applicant submits that no new subject matter has been added to the claims. Further, the Applicant respectfully requests that the Examiner's objections to claims 6, 8, and 21 be withdrawn.

Rejections under 35 U.S.C. §103

Claims 1-17

The Examiner has rejected claims 1-17 as being unpatentable over Zetts (U.S. Patent No. 6,378,129, hereinafter "Zetts") in view of Ueda (U.S. Patent No. 5,815,194, hereinafter "Ueda"). Applicant respectfully traverses the rejection.

The Applicant has amended independent claims 1 and 11 to further clarify the features the Applicant considers as being inventive. In particular, Applicant's independent claims 1 and 11, as amended, recite:

1. "A method of distributing and sharing processing loads and increasing fault tolerance between provider equipment and subscriber equipment of an interactive information distribution system, comprising the steps of:
receiving, at a head-end, a request for video information from said subscriber equipment;
executing a video session from at least one managing module on a primary head-end controller at said head-end;
dedicating, at said head-end, at least one secondary head-end controller having said at least one managing module as a reserve resource for executing said video session;
storing session-state data from said executed video session on at least one storage device; and
streaming, from a stream server, said video information to said requesting subscriber equipment during a normal mode of operation." (emphasis added).

09/458,897
Page 11 of 16

11. "In an interactive video distribution system including information provider equipment and subscriber equipment, apparatus comprising:
a stream server;
a plurality of head-end controllers, coupled to said stream server, for managing a video session at a head-end; and
a plurality of access controllers, coupled to said plurality of head-end controllers, for interacting with said subscriber equipment during said video session to responsively provide video information to said subscriber equipment upon a request for video information from said subscriber equipment." (emphasis added).

The test under 35 U.S.C. §103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy, 110 U.S.P.Q. 1021, 1024 (Fed. Cir. 1984) (emphasis added). Thus, it is impermissible to focus either on the "gist" or "core" of the invention, Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 230 U.S.P.Q. 416, 420 (Fed. Cir. 1986) (emphasis added). Moreover, the invention as a whole is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. *In re Wright*, 6 U.S.P.Q. 2d 1959, 1961 (Fed. Cir. 1988) (emphasis added).

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d. 1382, 1385, 165 U.S.P.Q. 494 496 (C.C.P.A. 1970), M.P.E.P. 2143.03. The references must be taken in their entireties, including those portions which argue against obviousness. Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 230 U.S.P.Q. 416, 420 Fed. Cir. 1986). It is impermissible within the framework of the 35 U.S.C. §103 to pick and choose from a reference only so much of it as will support a conclusion of obviousness to the exclusion of other parts necessary to a full appreciation of what the reference fairly suggests to one skilled in the art. *Id.* at 419. The combination of Zetts and Ueda fail to teach or suggest the Applicant's invention as a whole.

In particular, the Zetts reference discloses a dual video server configuration in which a primary server 130 plays out video clips directly to air, while a secondary server

09/458,897
Page 12 of 16

150 operates as a "hot stand by." The secondary server 150 is initially synchronized with the primary server and carries the same video content as the primary server 130. The secondary server 150 stands by to be switched to provide the common output "to air" 198 (for broadcast) in the event the primary server becomes unable, for any reason, to provide the output for the primary server 132 air 198. Both the primary video server 130 and the secondary video server 150 are controlled by a master automation computer 100 which executes a "play list" 110. The master control automation server 100 controls both the primary and the secondary servers via an industry standard connection 185 and related protocols. Both the primary 130 and the secondary server 150 stream composite analog video 193, 196, respectively, into an analog video router 165, which is configured to switch inputs from the video servers to air 198. (See, Zetts, col. 4, lines 33-56).

Nowhere in the Zetts reference is there any teaching, or even suggestion, of "executing a video session from at least one managing module on a primary head controller at said head-end," and "dedicating, at said head-end, at least one secondary head-end controller having at least one managing module as a reserve resource for executing said video session." Specifically, the Applicant's invention comprises the primary head-end controller and a secondary head-end controller, both of which are located at a single head-end. The primary and secondary head-end controllers are used to control the streaming of video information from a stream server also located at the head-end. That is, the managing module on the primary head-end controller is used for controlling the streaming of video information from the stream server at the head-end to the subscriber equipment. In an instance where the primary head-end controller is unavailable, the second head-end controller at the same head-end takes over for the primary head-end controller and then continues the streaming of video information from the stream server at the head-end to the subscriber equipment. Therefore, the Zetts reference fails to teach or suggest the Applicant's invention as a whole, since the Zetts reference discloses a single master automation computer 100 coupled to a primary and secondary server, as opposed to the Applicant's invention, which comprises a primary and secondary head-end controller coupled to a stream server at a head-end.

09/458,897
Page 13 of 16

Furthermore, the Ueda reference fails to bridge a substantial gap as between the Zetts reference and the Applicant's invention. In particular, the Ueda reference discloses communication steps between a client terminal 401 and a server station 121. Specifically, a user sends a command requesting a connection to the server station 121 from the client terminal 101 (at step S1001). Receiving the command (at step S1002), the server station 121 send a response acknowledging the connection (at step S1003). The client terminal 101 confirms the connection by the receipt of the response (at step S1004). Then the client terminal 101 sends a command requesting program download together with information of its own memory capacity (at step S1005). (See, Ueda, col. 5, lines 22-30). Nowhere in the Ueda reference is there any teaching or suggestion of the primary and secondary head-end controllers.

Furthermore, even if the two references somehow could be operably combined, the combination would merely disclose a primary server and a secondary server both coupled to a master control automation server 100, which controls both the primary and the secondary servers, and requesting information from a subscriber terminal to one of the video servers. Thus, the combined references are completely different from the Applicant's invention, since the combined references fail to teach or suggest "executing a video session from at least one managing module on a primary controller head-end controller at said head-end," and "dedicating at the said head-end at least one secondary head-end controller having said at least one managing module as a reserve resource for executing said video session." Therefore, the combination of Zetts and Ueda fail to teach or suggest the Applicant's invention as a whole.

As such, the Applicant submits that claim 1 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Furthermore, claims 2-10 and 12-17 depend directly or indirectly from independent claims 1 and 11 and recite additional features thereof. As such, and for at least the same reasons as discussed above, the Applicant submits that claims 2-10 and 12-17 are also not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Therefore, the Applicant respectfully requests that the rejections of such claims under 35 U.S.C. §103(a) be withdrawn.

09/458,897
Page 14 of 16

Claims 18-21

The Examiner has rejected claims 18-21 under 35 U.S.C. §103(a) as being unpatentable over Zetts, in view of Ueda, in further view of Maya et al. (U.S. Patent No. 5,845,328, hereinafter "Maya"). Applicant respectfully traverses the rejection.

Claims 18-21 depend from independent claim 11, and recite additional features thereof. For example, claims 18-21, when combined with independent claim 11 recite in part:

"In an interactive video distribution system including information provider equipment and subscriber equipment, apparatus comprising:
a stream server;
a plurality of head-end controllers, coupled to said stream server, for managing a video session at a head-end; and
a plurality of access controllers, coupled to said plurality of head-end controllers, for interacting with said subscriber equipment during said video session to responsively provide video information to said subscriber equipment upon a request for video information from said subscriber equipment." (emphasis added).

As discussed above, neither Zetts nor Ueda, either singly or in combination, teach or suggest the Applicant's invention as a whole. The combination of Zetts and Ueda merely discloses a primary server and a secondary server coupled to a master control automation server 100, which controls both the primary and the secondary servers in an industry standard connection 185 and related protocols. Thus, the combination of Zetts and Ueda merely disclose redundancy of the video servers, as opposed to the Applicant's invention, which discloses providing redundancy of the head-end controllers that manage a video session at the head-end. Therefore, the combination of Zetts and Ueda fails to teach or suggest the Applicant's invention as a whole.

Furthermore the Maya reference fails to bridge a substantial gap as between the Zetts and the Ueda references and the Applicant's invention. In particular, the Maya reference discloses a parallel computer system where each of the processor units 20 through 22 is connected to two storage units 10 and 11 by an input/output channels 20-6 through 22-6. The two storage units 10 and 11 can be accessed from any one of the processor units 20 through 22. The storage units 10 and 11 include a cache structure

09/458,897
Page 15 of 16

to provide a data cache function of the processing units 20 to 22 and a list structure to provide a message communication function among the processing units 20 to 22 and exclusive control function of data. (See, Maya, col. 3, lines 24-50). Nowhere in the Maya reference is there any teaching or suggestion of "a plurality of head-end controllers, coupled to said stream server, for managing a video session at a head-end." Furthermore, nowhere in any of the references is there any teaching or incentive to combine the Zetts and Ueda reference with the Maya reference. Specifically, nowhere in the Zetts or Ueda references is there any teaching or suggestion of providing redundancy to the master control automation server 100, which controls both the primary and the secondary servers. Moreover, nowhere in the Maya reference is there any teaching or suggestion that the processor units 20 to 22 may be operably combined with a stream server, or manage a video session at a head-end. Therefore, the Applicant's submit that these three references cannot be properly combined.

Moreover, even if the three references could somehow be operably combined, the combination would merely disclose a primary and secondary server coupled to a master control automation server 100, which controls both the primary and the secondary servers, and a plurality of storage units that include a cache structure to provide a data-cache function for the processing units. Therefore, the Applicant's submit that the combination of Zetts, Ueda, and Maya fail to teach or suggest the Applicant's invention as a whole, since the combined references fail to teach or suggest the "plurality of head-end controllers coupled to the stream server, for managing a video session at a head-end."

As such, the Applicant submits that claims 18-21 are not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Therefore, the Applicant respectfully requests that the rejection be withdrawn.

09/458,897
Page 16 of 16


CONCLUSION

Thus, the Applicant submits that none of the claims, presently in the application, are non-enabling, anticipated or obvious under the provisions of 35 U.S.C. §112, §102 or §103. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Eamon J. Wall, Esq. or Steven M. Hertzberg, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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